Medicines Management of Stable COPD

**TASK 1**
Confirm diagnosis of COPD: clinical syndrome with confirmatory obstructive spirometry (post-bronchodilator FEV₁/FVC<0.7). Exclude diagnosis of asthma (variable chest tightness, wheeze, cough and breathlessness; night-time waking; significant diurnal variation of symptoms and peak expiratory flow; symptoms related to work; normalisation of spirometry after inhaled β₂-agonist or a course of inhaled/oral corticosteroids). Check for other co-existing conditions; cardiac failure, bronchiectasis, anaemia; manage appropriately. If uncertain, refer to specialist.

**TASK 2**
Stop Smoking: All patients still smoking, regardless of age, should be encouraged to stop, and offered help to do so, at every opportunity (refer to local stop smoking programme).

**TASK 3**
Record MRC dyspnoea score. Offer Pulmonary Rehabilitation to patients with MRC score >2. All patients should be offered lifestyle advice (e.g. exercise and nutrition) and be encouraged to exercise.

**TASK 4**
Offer vaccinations: flu vaccination (annual) / pneumococcal vaccination.

**TASK 5**
Consider medication: Drug treatment should be guided by breathlessness and exercise limitation, exacerbation frequency, symptoms, disability and physiological complications that the patient experiences. At different times in the natural history of their disease different features may predominate and their management should change to reflect this. Before initiating a new prescription: (i) Check adherence with medicines (prescription refill records) (ii) Teach inhaler technique and ask patients to demonstrate it regularly (iii) Prescribe by brand name (iv) Provide and update plan for responding to symptoms.

**All breathless patients**

For exacerbations consider using up to 10 inhalations of salbutamol via MDI and Aerochamber Plus Flow-Vu or Salbutamol (breath-actuated) Easibreathe or Salbutamol (dry powder) Easyhaler.

**Persistent Breathlessness and Exercise Limitation**

- Long-acting antimuscarinic (LAMA): Spiriva Respimat (tiotropium) 2.5 micrograms two puffs OD or Eklira Genuair DPI (aclidinium) 322 micrograms one dose BD (particularly suitable if eGFR <50mls/min)
- Alternative LABA (Formoterol Easyhaler) if LAMA not tolerated

Review 1 month.

Step up treatment if persistent breathlessness.

**Frequent Exacerbations**

(see box bottom left for definition of exacerbation)

- ≥2 exacerbations in last 12 months and either
  - (i) FEV₁<50%; and/or
  - (ii) blood eosinophil count >0.3 x 10⁹/l (irrespective of FEV₁)

If exacerbations continue consider referral to Complex COPD clinic for further specialist treatment.

**Difficult to expectorate sputum**

- Consider referral for chest clearance techniques. Consider a trial of Carbocisteine capsules 750 mg TDS for 4 weeks then reduce to 750 mg BD if improvement in sputum production and reduction in viscosity.

**An exacerbation is defined as either/or:**
- Change in sputum colour
- Increased quantity of sputum
- Increased breathlessness
  (Persistent symptoms for more than 48 hours)

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**Medicines Management COPD—Supporting Information**

### Recommended measurements
- Post-bronchodilator FEV₁ and FVC when clinically stable. Usual loss FEV₁, 40ml/year
- Abnormal BMI
  - Consider referral for dietetic advice if BMI<21 and >30. If >30 consider presence of sleep apnoea
- Oxygen saturations
  - If <92% (when stable or 6 weeks after an exacerbation) refer for long term oxygen (LTOT) assessment
- Exacerbation frequency
- MRC dyspnoea score
- Blood eosinophil count

### Frequent Exacerbations — What to do?
- Consider alternative diagnosis (a fifth of all people on COPD registers do not have a diagnosis of COPD)
- Check for other co-existing conditions, for example, cardiac failure, bronchiectasis (consider HRCT chest), ischaemic heart disease, cor pulmonale, anxiety and depression. Manage appropriately
- Is the patient adherent to their treatments? Ask the patient and check prescription refill records
- Can the patient use their inhalers correctly? Check technique at every opportunity. Encourage a slow and steady inhalation with aerosol devices (e.g. MDI) and dry powder inhalers (DPI) quick and deep inhalation
- Check task list (page 1)
- Optimise inhaled therapy (see first page)
- Give general self management advice
- Offer pneumococcal vaccine once only and an annual influenza vaccination
- Refer for pulmonary rehabilitation

### Prescribing Notes:
- "Triple Therapy" = ICS/LABA/LAMA
- Caution: avoid duplication of LAMA and LABAs in combination products
- Mucolytics (e.g. carbocisteine) have limited value. Monitor response to treatment and stop, see LMSG guidance: [Prescribing Carbocisteine](#)
- Oral corticosteroids (prednisolone)-Maintenance use of oral corticosteroid therapy in COPD is generally **not** recommended and should not be started in primary care due to the risk of adverse effects i.e. osteoporosis, muscle wasting etc. Refer to specialist .
- LMSG guidance on oral steroids in rescue packs is available as well as information for patients on rescue packs
- Theophylline- Offer only after other inhaled therapy has been optimised. Monitor carefully.
- Macrolide antibiotics (e.g. azithromycin) should be initiated and guided by specialist respiratory physician only, with the aim to reduce frequency of exacerbations
- Give a steroid card to patients who have >4 courses of oral corticosteroids in 12 months
- Step down high dose ICS (>1000mcg beclometasone or equivalent) to formulary choices—see [LMSG Stepping down ICS in COPD guide](#)
- *Duoresp Spiromax is no longer recommended for initiation in new patients. It remains an LLR formulary medicine for established patients who are well controlled*

### Drug Class

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<thead>
<tr>
<th>Drug Class</th>
<th>Drug / Device</th>
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<tbody>
<tr>
<td>Short acting bronchodilators (SABA)</td>
<td>Salbutamol 100 microgram MDI&lt;br&gt;Salbutamol 100mcg Easyhaler DPI&lt;br&gt;Salamol 100 microgram (Salbutamol Easibreathe) MDI</td>
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<tr>
<td>Long acting bronchodilators</td>
<td>Spiriva (Tiotropium) Respimat&lt;br&gt;Braltus (Tiotropium) Zonda DPI&lt;br&gt;Eklira (Aclidinium) Genuair (LAMA) DPI&lt;br&gt;DuaKlir Genuair (LABA/LAMA) DPI&lt;br&gt;Spiolto Respimat (LABA/LAMA)</td>
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<tr>
<td>Inhaled long-acting β2 agonist / corticosteroid</td>
<td>Fostair MDI /Nexthaler 100/6&lt;br&gt;Symbicort turbohaler 400/12 (ICS/LABA) DPI&lt;br&gt;Fobumix 320/9 Easyhaler DPI&lt;br&gt;Duoresp 320/9 DPI</td>
</tr>
<tr>
<td>ICS/LABA/LAMA</td>
<td>Triple therapy: Trimbow 87/5/9 MDI</td>
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<tr>
<td>Mucolytics</td>
<td>Carbocisteine 375mg capsules</td>
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### COPD Value Pyramid

(Cost/QALY)

- **London Respiratory Team**
- **COPD Value Pyramid**
  - **Telehealth £20000/QALY**
  - **Triple Therapy £27000–£187000/QALY**
  - **Long term Oxygen Therapy £12-£16000/QALY**
  - **LABA £5-8000/QALY**
  - **Tiotropium/LAMA £7000/QALY**
  - **Pulmonary Rehabilitation £2000-£3000/QALY**
  - **Stop Smoking Support with pharmacotherapy £2000/QALY**
  - **Flu vaccination? £1000/QALY in “at risk” population**

### Check if the treatment is working?
- Has your treatment made a difference to you?
- Is your breathing easier?
- Can you do things now that you could not do at all before?
- Can you do the same things as before but are less breathless now?
- Has your sleep improved?

For further information contact Anna Murphy, Consultant Respiratory Pharmacist, Glenfield Hospital or your local consortium respiratory lead